



### KEY INFORMATION

#### Areas of Concern

Other populations in free-flowing portions of rivers in Maine which are not included in the Gulf of Maine DPS.

**Year Identified as “Species of Concern”**  
1997

#### Factors for Decline

- Dams
- Fishing
- Forest management practices
- Agriculture
- Salmon aquaculture

#### Conservation Designations

IUCN: Least Concern (entire species)  
Species of Greatest Conservation Need: ME

### Current Status:

#### **Demographic and Genetic Diversity Concerns:**

The populations of anadromous Atlantic salmon present in the Gulf of Maine **distinct population segment** (DPS) represent the last wild remnant of U.S. Atlantic salmon and the southernmost extent of the range of the species. The historic Atlantic salmon run in the US is estimated to have approached 500,000 fish. They began to disappear from the U.S. 150 years ago and currently, only remnant populations occur in a limited number of rivers in Maine. Naturally-reproducing Atlantic salmon in U.S. rivers are substantially reproductively isolated from those in Canada and Europe (King et al. 2001, Spidle et al. 2001, Spidle et al. 2003).

In 2000, NMFS and the U.S. Fish and Wildlife Service (the Services) listed some Gulf of Maine DPSs of Atlantic salmon as endangered under the Endangered Species Act. The range of the Gulf of Maine DPS is from the Kennebec River north to, but not including

The St. Croix River. In the same notice, the Services noted that other populations within the range of the DPS would be added if they were found to be naturally reproducing and to have historical, river-



# Species of Concern

NOAA National Marine Fisheries Service

specific characteristics. These populations were identified as candidate species and then Species of Concern. Major rivers in the Species of Concern listing include the upper Kennebec and Penobscot Rivers as well as the Androscoggin (Figure 1). As of 18 October 2006 these other populations also became **candidate species** again (71 FR 61022) as NMFS initiated a status review of these populations. That status review is now completed and NMFS will soon make a determination on whether any populations warrant listing under the ESA.

### Existing Protections and Conservation Actions:

Commercial and recreational fishing in Maine is prohibited.

### Data Deficiencies:

Data on the influence of thermal regimes and marine mammal predation could be better. Information is needed on the threat posed by Salmon Swimbladder Sarcoma Virus.

### Brief Species Description:

Most Atlantic salmon of U.S. origin spend two winters in the ocean before returning to their natal (birth) rivers to spawn. Those that return after only 1 year at sea are called grilse. Collette and MacPhee (2002), found in recent years they average 22 inches (57 cm) for fish that spent 1 year at sea, 30 inches (75 cm) for fish that spent 2 years at sea, and 35 inches (88 cm) for fish that were at sea for 3 years. Atlantic salmon require free-flowing rivers of moderate gradient that remain cool in the summer and contain clean gravel for spawning. Spawning occurs mostly from mid-October to mid-November. Eggs incubate slowly, hatching in March or April. The fry emerge about mid-May and feed on plankton and small invertebrates. Emergent fry quickly disperse from the nest, develop parr marks along their sides and enter the parr stage, which may last for 1 to 3 years in Maine (2 years is most typical). Parr habitat is typically riffle areas with adequate cover, water depth of 4 to 24 inches and moderate to fast water flow of 1 to 3 feet/sec. Juvenile salmon then **smoltify** (prepare physiologically for life in salt water) and migrate to the sea. Adults undertake long marine migrations from the mouths of U.S. rivers to the waters off of west Greenland while seasonally inhabiting Newfoundland and Labrador waters (Kocik and Brown 2002). While at sea, they prey on terrestrial insects, crustaceans, other invertebrates and fishes.

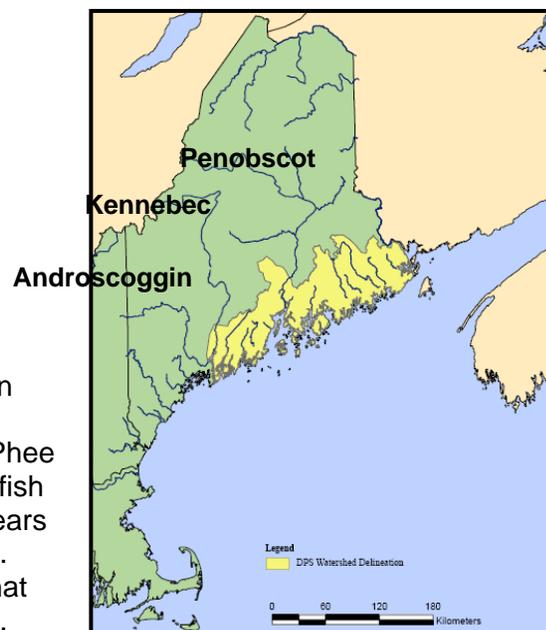


Figure 1. Location of the Gulf of Maine DPS watersheds that are listed as endangered (yellow). Other major rivers that are in the Species of Concern listing are labeled. NMFS and USFWS 2005.

## Contact Information

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### References:

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